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Customer No.:



07278

PATENT TRADEMARK OFFICE

Docket No: 2650/1F966

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Richard D. Granstein

Serial No.: 09/679,776

Art Unit: 1632

Confirmation No.:

Filed: October 5, 2000

Examiner: J. Li

For: PROTECTIVE IMMUNITY OR IMMUNOLOGICAL TOLERANCE INDUCED WITH RNA, PARTICULARLY TOTAL CELLULAR RNA

DECLARATION UNDER RULE 132

Hon. Commissioner of  
Patents and Trademarks  
Washington, DC 20231

September 20, 2001

Sir:

I, Richard D. Granstein, declare that:

1. I am a citizen of the United States and reside in Scarsdale, New York.

2 I received an M.D. from the University of California School of Medicine in 1978.

3 I am currently the Chairman of Dermatology at Weill Medical College of Cornell University, New York, the assignee of the above-identified U.S. patent application, where I have been employed since 1995. My curriculum vitae is attached as Exhibit 1. I am a specialist in dermatology and immunology.

4 I am the named inventor of the above-identified U.S. patent application.

5. The following experiment was conducted either by me or under my direction and control.

A. Ten (10) CAF1 mice were injected intravenously (i.v.) with 100 mg of total cellular RNA from the S1509a spindle cell tumor line.

B. Control animals were injected i.v. with irrelevant RNA from the NS cell line or saline alone.

C. One week after i.v. injection, the mice were sacrificed and the spleen cells were harvested.

D. A single cell suspension of splenic lymphoid cells was prepared.

E.  $10^8$  splenic lymphoid cells were injected into each of naïve CAF1 mice.

F. All mice were then immunized to the S1509a tumor by subcutaneous injection of disrupted S1509a cells three times at weekly intervals.

G. One week after the last immunization, syngenic epidermal cells enriched for

Langerhans cell content (eEC) by antibody- and complement-mediated deletion of Thy-1-bearing cells were pulsed with a soluble extract of the S1509a cells as a source of tumor-associated antigens (TAA).

H. TAA-pulsed eEC were then injected into a footpad of each mouse.

I. Twenty-four hour footpad swelling was assessed as a measure of DTH with a spring-loaded micrometer.

J. Mice that received splenic lymphoid cells from animals primed intravenously with RNA derived from the S1509a tumor demonstrated a significantly ( $p < 0.001$ ) decreased delayed-type hypersensitivity (DTH) response ( $31 \times 0.01 \text{ mm} \pm 1.9 \text{ [SEM]}$ ) compared to mice given spleen cells from mice primed i.v. with saline ( $49 \times 0.01 \text{ mm} \pm 2.4 \text{ [SEM]}$ ) or unrelated NS-RNA ( $43.3 \times 0.01 \text{ mm} \pm 1.9 \text{ [SEM]}$ ).

K. These results demonstrate that the suppression of the DTH response to S1509a derived TAA induced by i.v. administration of total cellular RNA from the S1509a spindle cell tumor line can be transferred with spleen cells.

6. I declare further that statements made in this Declaration are of my own knowledge and are true and that all statements made on information and belief are believed to be true and further these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Date:

9/29/01

  
RICHARD. D. GRANSTEIN

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Serial No. 08/679,776  
Rule 132 Declaration for Response to Office Action dated June 20, 2001

Docket No. 2650/1F966-US2  
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Richard D. Granstein, M.D.

.CURRICULUM VITAE

Name: Richard D. Granstein  
 Address: 70 High Point Road, Scarsdale, New York 10583  
 Place of Birth: Detroit, Michigan  
 Education:  
     1974 B.S. Massachusetts Institute of Technology  
     1978 M.D. University of California, Los Angeles, School  
                     of Medicine

Postdoctoral Training:

Internship and Residencies

1978 - 1979 Intern in Medicine, Harbor-UCLA Medical Center,  
 Torrance, California  
 1979 - 1981 Resident in Dermatology, Massachusetts General  
 Hospital, Boston, Massachusetts

Research Fellowships

1981 - 1982 Research Fellow, Cancer Biology Program,  
 NCI-Frederick Cancer Research Facility,  
 Frederick, Maryland  
 1982 - 1984 Clinical and Research Fellow in Dermatology,  
 Massachusetts General Hospital, Boston, Massachusetts

Licensure and Certification:

1979 Diplomate, National Board of Medical Examiners  
 1979 California License Registration  
 1981 Massachusetts License Registration  
 1981 Maryland License Registration  
 1983 Diplomate, American Board of Dermatology  
 1985 Special Qualification, Dermatologic  
 Immunology/Diagnostic and Laboratory Immunology  
 1995 New York License Registration

Academic Appointments:

1979 - 1981 Clinical Fellow in Dermatology, Harvard Medical  
 School, Boston, Massachusetts  
 1982 - 1984 Clinical and Research Fellow in Dermatology, Harvard  
 Medical School, Boston, Massachusetts  
 1984 Instructor in Dermatology, Harvard Medical School,  
 Boston, Massachusetts  
 1984 - 1990 Assistant Professor of Dermatology, Harvard Medical

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|                 |   |
|-----------------|---|
| 1990 - 1996     | School, Boston, Massachusetts   |
| 1996 -1997      | Associate Professor of Dermatology, Harvard Medical School, Boston, Massachusetts   |
| Medical School, | Lecturer in Dermatology, Harvard  |
| 1995 -          | Boston, Massachusetts   |
| Dermatology and | George W. Hambrick, Jr. Professor of  |
| Medical College | Chairman, Department of Dermatology, Weill of Cornell University New York, New York |

Hospital Appointments:

|             |  |
|-------------|--|
| 1984 - 1987 | Assistant in Dermatology, Massachusetts General Hospital, Boston, Massachusetts                            |
| 1984 - 1990 | Assistant in Medicine (Dermatology), Children's Hospital Medical Center, Boston, Massachusetts             |
| 1987 - 1990 | Assistant Dermatologist, Massachusetts General Hospital  |
| 1990 - 1995 | Associate Dermatologist, Massachusetts General Hospital  |
| 1994 - 1995 | Associate Chief of Dermatology for Research, Massachusetts General Hospital                                |
| 1995 -      | Dermatologist-in-Chief, New York-Presbyterian Hospital (New York weill Cornell Campus), New York, New York |

Other Professional Activities:

|            |   |
|------------|---|
| 1985       | Invited Lecturer, New England Dermatology Society,  |
| 1986       | Providence, Rhode Island  |
| Meeting of | Co-chairman, Photobiology Session, Annual the Society for Investigative Dermatology, Washington,                        |
| 1987       | D.C.  |
| Annual     | Co-chairman, Immunologic Cytokines Session, Meeting of the Society for Investigative Dermatology, San Diego, California |
| 1987       | Visiting Professor, Department of Dermatology, Western Reserve University, Cleveland, Ohio                              |
| Case       | Invited Lecturer, Genentech, Inc., South San Francisco,   |
| 1987       | California  |
| 1988       | Invited Lecturer, Department of Dermatology, New York University, New York, New York                                    |
| 1989       | Co-chairman, AAP/ASCI/AFCD/SID Joint Session, Annual  |

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|                       |  |
|-----------------------|--|
| 1989                  | Meeting of the American Federation for Clinical Research, Washington, DC |
| Symposium,            | Plenary Lecturer, 4th Immunodermatology                                  |
|                       | Amsterdam, The Netherlands   |
| 1989                  | Invited Lecturer, International Dermatologic                             |
| Symposium             | on Interferons and Related Cytokines, Berlin,                            |
| Federal               | Republic of Germany  |
| 1989-1994             | Consultant, Genentech, Inc., So. San                                     |
| Francisco, California |  |
| 1990                  | Visiting Professor, Department of Dermatology,                           |
| of                    | University of California, San Francisco School                           |
|                       | Medicine   |
| 1990                  | Visiting Professor, Department of Dermatology                            |
| and                   | Medical Grand Rounds Lecturer, The University                            |
| of                    | Toronto, Sunnybrook Health Science Centre,                               |
| Toronto, Ontario      | Invited Lecturer, Department of Dermatology,                             |
| 1991                  |  |
| Stanford University,  | Palo Alto, California  |

Richard D. Granstein, M.D.

- 1991 Chairman, Growth Factors, Cytokines and Receptors  
Minisymposium, Annual meeting of the Society for  
Investigative Dermatology
- 1992 Guest Editor, *Chemical Immunology*
- 1993 Chairman, Symposium on Photoprotection, Dermatology  
2000 Congress, Vienna, Austria
- 1993 Invited Lecturer, Department of Dermatology,  
University of Muenster,  
Muenster, Germany
- 1993 Co-Chairman, Minisymposium on Cytokines,  
Tricontinental  
Meeting of the Japan Society for Investigative  
Dermatology, The  
Society for Investigative Dermatology and the  
European Society for  
Dermatologic Research, Kyoto, Japan
- 1993 Invited Lecturer, Shiseido Co., Ltd.,  
Yokohama, Japan
- 1994 Invited Lecturer, Year in Medicine, Clinical  
Research Meeting  
(AAP/ASCI/AFCR), Baltimore, Maryland
- 1994 Plenary Lecturer, New Trends in Immunopharmacology  
1994,  
Tokyo, Japan
- 1994 Invited Lecturer for Grand Rounds, University of  
Michigan Cancer  
Center, Ann Arbor, Michigan
- 1995 Visiting Professor, Division of Dermatology,  
University of California,  
Los Angeles School of Medicine, Los Angeles,  
California
- 1995 Invited Lecturer for Grand Rounds, Department of  
Dermatology,  
New York University School of Medicine, New York,  
New York
- 1995 Invited Lecturer, Symposium on Photocarcinogenesis:  
Mechanisms,  
Models and Human Health Implications, Washington,  
DC
- 1995- Consultant, Connetics, Palo Alto,  
California
- 1996 Plenary Lecturer, Dermatology 2000 Congress,  
Vancouver,  
British Columbia, Canada
- 1996 Co-chairman, Symposium on Nerves, Neuropeptides and  
the Skin,  
Annual Meeting of The Cutaneous Biology Foundation,  
Aspen, Colorado
- 1996 Dermatology 2000 Congress, Vancouver, British  
Columbia, Canada
- 1996 Invited Lecturer, New York Biotechnology  
Association, New York,  
New York
- 1996 Invited Lecturer, Estee Lauder, Inc., Melville, New



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York  
 1996 Invited Lecturer, Department of Dermatology Grand  
 Rounds, Albert Einstein College of Medicine, New York, New  
 York  
 1996- Consultant, Alza Corporation, Palo Alto,  
 California  
 1997 Invited Lecturer, Department of Surgery, New York  
 Hospital-Cornell  
 Medical Center, New York, New York  
 1997 Invited Lecturer, Department of Hematology and  
 Oncology Grand Rounds, Cornell University Medical  
 College, New York,  
 New York  
 1997 Invited Lecturer, General Motors Cancer Research  
 Foundation Annual  
 Conference, Bethesda, Maryland  
 1997 Invited Lecturer, Shiseido Co., Ltd., Yokohama,  
 Japan  
 1997 Visiting Professor, Department of Dermatology, Yale  
 University School of  
 Medicine  
 1998 Invited Lecturer, Johnson & Johnson Skin Biology  
 Research Center,  
 Skillman, New Jersey  
 1998 Invited Lecturer, Estee  
 Lauder, Melville, New York  
 1998 Invited Lecturer, Department of Dermatology, Duke  
 University, Durham,  
 North Carolina  
 1998 Invited Lecturer, American Academy  
 of Allergy, Asthma and Immunology, Washington, DC  
 1998 Invited Lecturer, Department of Dermatology,  
 University of Cincinnati,  
 Cincinnati, Ohio  
 1998 Invited Lecturer, Advances in Cancer  
 Research, Cornell University Medical  
 College, New York, New York  
 1998 Invited Lecturer, Dermatology Foundation, Winter  
 Dermatology Colloquium,  
 Pebble Beach, California  
 1998 Invited Lecturer, Atlantic Dermatological  
 Conference, New York, New York  
 1998 Invited Lecturer, Update Your Medicine Lecture  
 Series, New York Hospital-Cornell Medical Center,  
 New York, New York  
 1998 Invited Lecturer, Seminars in Clinical Research,  
 Rockefeller University, New York, New York  
 1998 Invited Lecturer, Seventh Annual R. William Gange  
 Lecture, Department of Dermatology, Massachusetts  
 General Hospital, Boston, Massachusetts  
 1998 Invited Lecturer, Department of Dermatology and  
 Cutaneous Biology Grand Rounds, Thomas Jefferson  
 University School of Medicine, Philadelphia,

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- 1999 Pennsylvania  
Invited Lecturer, Visiting Scholar Program, Skin  
Diseases Research Center, Department of  
Dermatology, Columbia University, New York, New  
York
- 1999 Visiting Professor, Department of Dermatology,  
State University of New York Health Science Center  
at Brooklyn, Brooklyn, New York
- 1999 Visiting Professor, Department of Dermatology,  
University of Michigan Medical School, Ann Arbor,  
Michigan
- 1999 Visiting Professor, Department of Dermatology,  
University of Louisville, Louisville, Kentucky
- 2000 Invited Lecturer, Department of Dermatology, New  
York Medical College, Valhalla, New York
- 2000 Plenary Lecturer at Annual Meeting of the American  
Academy of  
Dermatology, *Dialogues in Dermatology, Reflections  
on Our Past, Visions for Our Future - Dermatology  
Research*, San Francisco, CA
- 2000 Visiting Professor, Department of Dermatology,  
Columbia University College  
of Physicians and Surgeons, New York, New York
- 2001 Invited member, Extramural Roundtable on Skin,  
NIAMS, Bethesda, Maryland
- 2001 Visiting Professor, Department of Dermatology,  
University of Texas, Southwestern Health Science  
Center, Dallas, Texas

#### Awards and Honors:

- 1965 Eagle Scout
- 1972 Associated Western Universities  
Undergraduate Research Program
- 1973 Phi Lambda Upsilon
- 1978 Alpha Omega Alpha
- 1982 Dermatology Foundation Fellowship  
Recipient
- 1983 National Research Service Award

#### Major Committee Assignments:

- 1986 - 1989 the Scientific Advisory Committee to  
the Mallinckrodt General Clinical  
Research Center, Massachusetts General  
Hospital, Boston, Massachusetts  
NIH Site Visit Committee,
- 1987 Project Grant Review, New York  
University, New York, New York
- 1988 - 1993 Radiation Safety Committee,  
Massachusetts General  
Hospital, Boston, Massachusetts

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|  |   |
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| 1988 - 1991  | Admissions Committee, Harvard Medical School,   |
|  | Boston, Massachusetts   |
| 1989 - 1993  | Committee on Research,  |
| Massachusetts General  | Hospital  |
| 1989 - 1993  | Subcommittee on Animal Care,  |
|  | Protocol Review Group, Massachusetts General Hospital, Boston, Massachusetts  |
| 1989 - 1993  | Chairman, Subcommittee on Animal Care, Protocol Review Group, Massachusetts General Hospital, Boston, Massachusetts |
| 1992 -   | NIH Reviewers Reserve   |
| 1992   | NIH Site Visit Committee, Program Project Grant Review, New York University, New York, New York                     |
| 1992   | Ad Hoc Reviewer, NIH General Medicine A1 Study  |
|  | Section, Naples, Florida  |
| 1994   | Ad Hoc Reviewer, NIH General Medicine A1 Study  |
| 1995   | Section, Washington, D.C.   |
| Committee for  | Chairman, External Advisory   |
| for Special Surgery,   | Evaluation of Research, Hospital  |
|  | New York, New York  |
| 1996-  | Chairman, Advisory  |
| Committee to the Gene Therapy  | Core Facility, Cornell University   |
| Medical College,   | New York, New York  |
| 1997-2000  | Committee of Review of the Medical  |
| College, Cornell   | University Medical College  |
| 1997   | Ad Hoc Committee to Review  |
| Departmental Structure,  | Cornell University Medical College  |
| 1998-2000  | Chairman, Search Committee for  |
| Chair of Department  | of Cell Biology, Cornell University   |
| Medical College  |   |
| Memberships, Offices, and Committee Assignments in Professional Societies: |   |
| 1981-  | American Society for Photobiology   |
| 1982-  | Society for Investigative Dermatology   |
| 1983-  | American Association for the Advancement of   |
| Science  |   |
| 1983-  | American Academy of Dermatology   |
| 1984-1996  | New England Dermatological Association  |

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|   |  |
|---|--|
| 1985-<br>1992-1995<br>Photobiology  | American Federation for Clinical Research<br>Counselor, American Society for   |
| 1994-<br>1995-2000<br>Investigative Dermatology<br>and Priorities,                | American Society for Clinical Investigation<br>Board of Directors, Society for<br>Member, Committee on Long-range Planning   |
| 1995-<br>1995-<br>1995-<br>1996-<br>1996-1997<br>Academy of Medicine<br>1997-2000 | Society for Investigative Dermatology<br>Dermatologic Society of Greater New York<br>New York Academy of Medicine<br>Manhattan Metropolitan Dermatologic Society<br>New York Dermatological Society<br>Secretary, Dermatology Section, New York<br>Member, Committee on Finances, Society for<br>Investigative Dermatology |
| 1997-1998<br>Academy of Medicine<br>1998-2000<br>Steering                         | President, Dermatology Section, New York<br>Member, Skin Disease Research Agenda   |
| Dermatology   | Committee, Society for Investigative   |

#### Editorial Boards and Editorial Positions

|  |  |
|--|--|
| 1991-<br>1992-1995<br>1992-1997<br>1996-<br>Surgery<br>1995-1998 | <i>Experimental Dermatology</i><br><i>Regional Immunology</i><br><i>Journal of Investigative Dermatology</i><br><i>The Journal of Cutaneous Medicine and</i><br><i>Associate Editor, Journal of Immunology</i> |
|--|--|

#### Major Research Interests:

1. Immunodermatology and photoimmunology, especially studies on the role of the cutaneous immune system in the recognition or non-recognition of malignancies.
2. Studies on the immunobiology of Langerhans cells, the effects of and non-ionizing radiation on immunologic function *in vitro* and *in vivo*, and effects and roles of polypeptide cytokines, neuropeptides and stress on immune functions in the skin.
3. Ocular immunology with an emphasis on the morphology and function of resident immunocompetent cells in the eyes and the role of immunomodulatory molecules in ocular immunity.

#### Research Funding:

Past:

Richard D. Granstein, M.D.

|   |  |
|---|--|
| 1982-83<br>"PUVA-induced Skin<br>Studies"                                     | Dermatology Foundation, P.I.,<br>Cancer: Experimental and Clinical   |
| 1983-84<br>doctoral Fellow  | NIH, IF32 CA07014, Post-   |
| Skin Cancer:  | (Individual NRSA), "PUVA-induced   |
| 1985-90<br>"Activation of   | Experimental and Clinical Studies"   |
| 1985-86<br>Cancers"   | NIH, 1K08 AM01425, P.I.,<br>Suppression and UVR-induced Skin   |
| 1985-86<br>P.I., "Use of Monoclonal<br>Antibody to Modulate<br>Graft versus   | William F. Milton Fund,<br>Anti-interleukin 2 Receptor<br>Allogeneic Skin Graft Rejection and<br>Host Disease in Mice" |
| 1987-90<br>"Ocular Cells in the<br>Suppression"                               | NIH, R01 EY07782, P.I.,<br>Activation of Immunity and  |
| 1989-90<br>of keloids with  | Genentech, Inc., P.I., "Treatment<br>Gamma Interferon"   |
| 1992-98<br>"Epidermal Antigen<br>Immunity"                                    | NIH, R01 AR40667, P.I.,<br>Presenting Cells and Tumor  |
| 1994- 95<br>P.I., "An Examination of<br>plus Long-wave<br>Allograft Survival" | Dermatology Foundation,<br>the Systemic Effect of Angelicin<br>Ultraviolet Radiation on Murine                         |
| Current:  |  |
| 1994-   | NIH, R01 AR42429, P.I., "Langerhans<br>Cells and Nerves: Bidirectional<br>Signaling"                                   |
| 1997-   | NIH, R01 AR44240, P.I., "Regulation<br>Langerhans Cell Function"   |
| 1998-1999<br>"Physiologic Responses to  | Shiseido Co., Ltd., P.I.,<br>Stress"   |
| Teaching Experience:  |  |
| 1982 - 1996<br>Massachusetts  | Attending Physician, Dermatology Service,<br>General Hospital, Boston, Massachusetts                                   |

Richard D. Granstein, M.D.

|   |  |
|---|--|
| 1983 - 1985<br>(continuing<br>Boston,                     | Lecturer, Practical Dermatology Course<br>medical education), Harvard Medical School,<br>Massachusetts           |
| 1984 - 1994<br>Harvard                                    | Lecturer, Pathophysiology of Skin Course,<br>Medical School, Boston, Massachusetts                               |
| 1985 - 1987<br>Harvard                                    | Director, Pathophysiology of Skin Course,<br>Medical School, Boston, Massachusetts                               |
| 1986 - 1988<br>Course,<br>Worcester,                      | Lecturer, Second Year Pathophysiology<br>University of Massachusetts Medical School,<br>Massachusetts            |
| 1989-1992<br>Meeting of the                               | Lecturer, Basic Immunology Course, Annual<br>American Academy of Dermatology                                     |
| 1993<br>and Skin Cancer                                   | Director, Focus Session on Langerhans Cells<br>Annual Meeting of the American Academy of                         |
| Dermatology<br>1993<br>Annual                             | Lecturer, The Skin and the Nervous System,<br>Meeting of the American Academy of                                 |
| Dermatology<br>1994<br>Presenting Cells of the            | Director, Forum on T Cells and Antigen<br>Skin, Annual Meeting of the American                                   |
| Academy of Dermatology<br>1994 - 1995<br>Course), Harvard | Lecturer, Immunology 200A (Graduate<br>Medical School  |
| 1995 -<br>New York Hospital-                              | Attending Physician, Dermatology Service,<br>Cornell Medical Center, New York, New York                          |
| 1996<br>Year Pathophysiology<br>New York,                 | Director of Dermatology Section, Second<br>Course, Cornell University Medical College,<br>New York               |
| 1996<br>Cells in the Skin, Annual                         | Director, Forum on T Cells and Antigen<br>Meeting of the American Academy of                                     |
| Dermatology, Washington,<br>D.C.                          | Director, Forum on T Cells and Antigen<br>Annual Meeting of the American Academy of                              |
| 1997<br>Cells in the Skin, Annual<br>Dermatology,         | San Francisco, California<br>Director, Forum on T Cells and Antigen<br>Annual Meeting of the American Academy of |
| 1998<br>Cells in the Skin, Annual                         |  |

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Dermatology, Orlando,  
Florida  
1999 Lecturer, Forum on T Cells and Antigen  
Cells in the Skin, Annual  
Meeting of the American Academy of  
Dermatology, Washington,  
D.C.  
2000 Lecturer, Forum on T Cells and Antigen  
Cells in the Skin, Annual  
Meeting of the American Academy of  
Dermatology, San  
Francisco, CA

Richard D. Granstein, M.D.

PUBLICATIONS - Richard D. Granstein, M.D.

I. Original Reports

1. Urist MR, Granstein RD, Nogami H, Svenson L, Murphy R. Transmembrane bone morphogenesis across multiple-walled diffusion chambers. *Arch Surg* 1977; 112:612-19.
2. Adrian RM, Murphy GF, Sato S, Granstein RD, Fitzpatrick TB, Sober AJ. Diffuse melanosis secondary to metastatic malignant melanoma. *J Am Acad Dermatol* 1981; 5:308-18.
3. Granstein RD, Morison WL, Kripke ML. The role of UVB radiation in the induction and elicitation of photocontact hypersensitivity to TCSA in the mouse. *J Invest Dermatol* 1983; 80:158-62.
4. Granstein RD, Morison WL, Kripke ML. The role of suppressor cells in the induction of murine photoallergic contact dermatitis and in its suppression by prior UVB radiation. *J Immunol* 1983; 130:2099-103.
5. Tominaga A, Lefort S, Mizel SB, Dambrauskas JT, Granstein RD, Lowy A, Benacerraf B, Greene MI. Molecular signals in antigen presentation. I. Therapeutic effects of interleukin 1 and 2 on ultraviolet radiation-treated antigen presenting cells in vivo and in vitro. *Clin Immunol Immunopathol* 1984; 29:282-83.
6. Granstein RD, Lowy A, Greene MI. Epidermal antigen presenting cells in activation of suppression: Identification of a new functional type of ultraviolet radiation-resistant epidermal cell. *J Immunol* 1984; 132:563-65.
7. Granstein RD, Tominaga A, Mizel SB, Parrish JA, Greene MI. Molecular signals in antigen presentation. II. Activation of cytolytic cells in vitro after ultraviolet radiation or combined gamma and ultraviolet radiation treatment of antigen presenting cells. *J Immunol* 1984; 132:2210-18.
8. Lowy A, Drebin JA, Monroe JG, Granstein RD, Greene MI. Genetically restricted antigen presentation for immunologic tolerance and suppression. *Nature* 1984; 308:373-75.
9. Granstein RD, Parrish JA, McAuliffe DJ, Waltenbaugh CR, Greene MI. Immunologic inhibition of ultraviolet radiation-induced tumor suppressor cell activity. *Science* 1984; 224:615-17.
10. Granstein RD. Epidermal I-J-bearing cells are responsible for transferable suppressor cell generation after



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- immunization of mice with ultraviolet radiation-treated epidermal cells. *J Invest Dermatol* 1985; 84:206-09.
11. Granstein RD, Greene MI. Splenic I-J bearing antigen presenting cells in activation of suppression: further characterization. *Cell Immunol* 1985; 91:12-20.
  12. Polla L, Margolis R, Goulston C, Parrish JA, Granstein RD. Enhancement of the elicitation phase of the murine contact hypersensitivity response by local ultraviolet radiation. *J Invest Dermatol*. 1986; 86:13-17.
  13. Granstein RD, Margolis R, Mizel SB, Sauder DN. In vivo inflammatory activity of epidermal cell-derived thymocyte activating factor and interleukin-1 in the mouse. *J Clin Invest* 1986; 77:1020-27.
  14. Granstein RD, Goulston C, Gaulton G. Prolongation of murine skin allograft survival by immunologic manipulation with anti-interleukin-2 receptor antibody. *J Immunol* 1986; 136:898-02.
  15. Granstein RD, Smith L, Parrish JA. Prolongation of murine skin allograft survival by the systemic effects of 8-methoxypsoralen and longwave ultraviolet radiation (PUVA). *J Invest Dermatol* 1987; 88:424-28.
  16. Granstein RD, Murphy GF, Margolis RJ, Amento EP. Gamma interferon inhibits collagen synthesis in vivo in the mouse. *J Clin Invest* 1987; 79:1254-58.
  17. Granstein RD, Askari M, Whitaker D, Murphy GF. Epidermal cells in activation of suppressor lymphocytes: further characterization. *J Immunol* 1987; 138:4055-62.
  18. Granstein RD, and Sauder DN. Whole-body exposure to ultraviolet radiation results in increased serum interleukin-1 activity in humans. *Lymphokine Res* 1987; 6:187-193.
  19. Latina M, Flotte T, Crean E, Sherwood ME, Granstein RD. Immunohistochemical staining of the human anterior segment: evidence that resident cells play a role in immunologic responses. *Arch Ophthalmol*. 1988; 106:95-99.
  20. Sharpe RJ, Margolis RJ, Askari M, Amento EP, Granstein RD. Induction of dermal and subcutaneous inflammation by recombinant cachectin/tumor necrosis factor (TNF alpha) in the mouse. *J Invest Dermatol* 1988; 91:353-57.
  21. Gallo RL, Kochevar IE, Granstein RD. Ultraviolet radiation induces a change in cell membrane potential *in vitro*: a possible signal for ultraviolet radiation induced alteration in cell activity. *Photochem Photobiol* 1989; 49:655-62.

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22. Gallo RL, Granstein RD. The inhibition of allergic contact dermatitis and ultraviolet radiation-induced tissue swelling in the mouse by topical application of amiloride. *Arch Dermatol* 1989; 125:502-56.
23. Granstein RD, Deak MR, Jacques SL, Margolis RJ, Flotte TJ, Whitaker D, Long FH, Amento EP. The systemic administration of gamma interferon inhibits collagen synthesis and acute inflammation in a murine skin wounding model. *J Invest Dermatol* 1989; 93:18-27.
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